

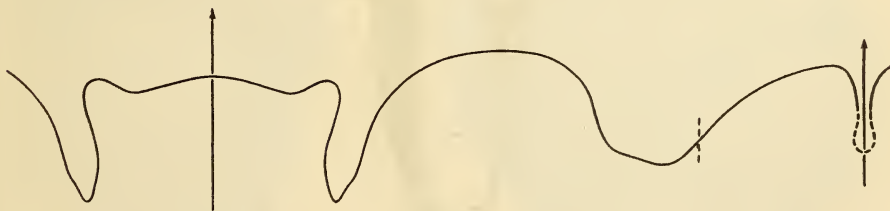
15. *Tertiary Nautiloids dredged near Cape of Good Hope.* By A. K. MILLER and W. M. FURNISH, State University of Iowa, Iowa City, Iowa.

(With Plate XXVI and 2 text-figures.)

Four *Aturias* from collections in the South African Museum at Cape Town were recently sent to us on loan by Dr. Sidney H. Haughton, formerly of the Union of South Africa Geological Survey. These specimens were secured early in 1938 by Captain J. T. R. Gibson, skipper of a trawler belonging to Messrs. Irwin and Johnson; he dredged them from a depth of 160 to 170 fathoms just west of Cape of Good Hope, between Slangkop Lighthouse and Cape Point. A single species is represented by the four specimens, which are internal molds composed of phosphate rock. Dr. Haughton has informed us that similarly preserved lamellibranchs, gasteropods and some mammalian remains were found associated.\*

Representatives of *Aturia*, though almost invariably rare, are of very widespread occurrence in the marine Tertiary. They range from the Eocene to the Miocene, inclusive, and may have been found in slightly older strata. In the Atlantic-Gulf coastal region of North America, where Tertiary deposits are well developed and have been studied extensively, *Aturias* do not occur below the base of the Eocene, and they are known from only one locality in the Miocene. However, in westernmost North America, South America, and Europe they seem to be less rare in the Miocene. After studying specimens from many widely separated localities in various parts of the world, we are convinced that typical representatives of the genus have a long range in the Tertiary. Therefore, we can not be certain as to the precise age of the specimens under consideration.

FIG. 1. — *Aturia lotzi* Böhm, Suture.



\*) The first record in print of the occurrence of *Aturia* in the phosphatic-glauconitic deposit off the Cape of Good Hope appears to be in L. Cayeux: *The Phosphatic Nodules of the Agulhas Bank*. Ann. S. Afr. Mus. XXXI, p. 133. 1934. [Ed.] Vol. XLII. Part IV.

The more diagnostic features of these Cape of Good Hope nautiloids are elucidated by the accompanying illustrations. In general physiognomy, this form is reminiscent of similar-sized *Aturias* from the Americas. Because of the width and shape of the umbilical lobe of the sutures, it can be said to belong in a group typified by *Aturia angustata* (Conrad) of the Oligocene and Miocene of the North American Pacific coastal region. The nearest geographic occurrence of the genus is that of *A. lotzi* Böhm at Bogenfels, some 500 miles north. Insofar as we can tell from the published information in regard to the type specimens of that species, they are conspecific with those we are studying. All of them came from a sandstone which carries a fauna generally identified as Miocene.

Each of the four specimens under consideration represents a different portion of the phragmocone, and it is possible that all are parts of a single large individual, which (including the body chamber) had a diameter of 250 mm., or more. In every case, the surface is smooth and polished but, nevertheless, bears serpuloid worm tubes, even on the exposed septa. Clearly, the pieces lay loose on the bottom of the sea and were dissociated.

It should perhaps be stated that *Aturias* are known from latitudes as far north and south as 55 or 60 degrees. Specimens have been collected from Tierra del Fuego, Tasmania, and New Zealand. Therefore, their discovery near southernmost Africa is not surprising.

#### REFERENCE

MILLER, A. K.: Tertiary nautiloids of west-coastal Africa: Mus. Congo Belge, Ann., Sér. in 8°, Sci. Géol., vol. 8, pp. 1-88, pls. 1-31. 1951.

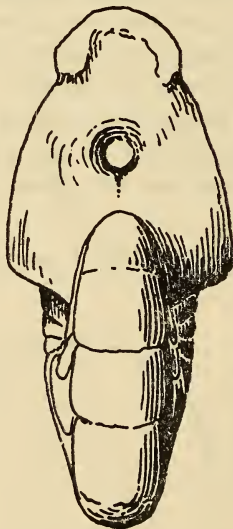


FIG. 2. — *Aturia lotzi* Böhm. Drawing traced from a photograph to show position of siphuncle. This excellently preserved specimen was obtained by the South African Museum from off Cape Columbine, Saldanha Bay area, after this paper had been received from the authors, and has not been seen by them. Natural size. [Ed.].